

DOCKETED

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Comment Received From: Shawn Mullins

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Owens Corning Comments to 2019 BEES Draft Language

Additional submitted attachment is included below.

October 19, 2017

California Energy Commission
Attention: Docket No. 17-BSTD-01
Dockets Office 1516 Ninth Street, MS-4
Sacramento CA 95814

RE: 2019 Building Energy Efficiency Standards (BEES) Draft Language Comments

To Commissioner McAllister and Commission Staff:

We would like to begin by thanking Commissioner McAllister and Commission Staff for their efforts thus far in the development and transparency related to the 2019 BEES. Owens Corning acknowledges that there are a variety of perspectives regarding the BEES and we can appreciate the very difficult job staff has in accommodating the various perspectives and opinions.

Owens Corning is a leader in fiberglass and related materials, systems and solutions. Our products are largely a result of our applied Building Science and Sustainability efforts which drive our innovation and our global operations. Owens Corning product specifications and operational activities are specifically undertaken with a measurable awareness towards natural resources stewardship as an integral part of our self-imposed sustainability journey. Thus, it is with long-term resource sustainability, durability, occupant comfort and energy efficiency, that we provide the following perspectives.

We support the Commission's goal of achieving a Net Zero Energy benchmark for residential homes and non-residential buildings. In doing so, it is critical that the Commission maintain the historical and well established loading order of focusing on energy efficiency first, renewables and associated technology second, and grid produced energy last. We believe energy efficiency and renewables, when applied in the proper balance are inherently complimentary. To achieve this complimentary equilibrium, energy efficiency must be optimized to the maximum extent feasible. Only when viewed in this context and with proper weight given to sustainability concerns can both sides of this equation provide society and the industry with maximum value and performance. This is not an "either/or" conversation, but one of using both paths to create an intelligent and predictable outcome in support of the Commission's ZNE goals.

Current California Energy Commission (CEC) Staff Recommendations:

In regards to what has been proposed to date, Owens Corning supports existing CEC staff recommendations, including:

- Prescriptive language with enhanced assembly U-factors for attics and walls
 - Such language is consistent with properly prioritizing the most durable components of the enclosure first, and "bolt-on", or other mechanical and appliance measures second

- This language recognizes the added life-cycle benefits of the enclosure which exceed the life-cycle of statute-constricted cost-effectiveness calculations as compared to other measures with more limited lifetime expectations (15-20 years for mechanicals and PV solar, with a to be determined battery storage durable lifetime vs. 50+ years for the building envelope)
- Envelope measures do not drop off or otherwise degrade in performance over their useful life
- Envelope measures do not require maintenance to deliver anticipated performance levels
- Envelope measures do not require occupant interaction or maintenance/replacement throughout the life of the home
- Envelope measures pay compound and consistent dividends for the life of the home
- Due to construction realities, builders and homeowners have only “one shot” at achieving the optimum building envelope and that is during initial construction
- Quality Insulation Installation (QII) as a prescriptive measure
 - QII, including proper air barrier methodologies, aligns with existing manufacturer installation requirements
 - Aligning QII in code expectations simplifies the compliance process by removing an artificial compliance penalty (when assuming a non-QII installation) and its associated credit for selective correction
 - Energy Consultants we engage with have historically supported QII
- The Energy Design Rating (EDR) path as currently proposed
 - Maintain existing staff recommendations to eliminate the PV Solar trade-off credit against high performance walls and high performance attics
 - Restrict and refrain from adopting new PV Solar + Battery Storage credits which offset the High Performance Wall (HPW) and High Performance Attic (HPA) requirements and further compromise the building envelope
 - Maximum benefit from renewables and associated components such as battery storage is best achieved when the building envelope and efficiency is maximized, thereby reducing the design loads imposed on renewables and battery storage required to achieve ZNE goals
 - Maintaining battery storage as a non-envelope/energy efficiency credit allows for maximum opportunity to develop the appropriate mechanisms and impact of said storage on grid harmonization efforts – we don’t yet know what the path looks like for integrating these devices into grid management strategies on a large-scale basis
- 2016/2019 BEES Cost Impairment Rebuttal
 - Much has been said regarding the lack of cost data and/or increased cost of the 2016 BEES related to HPW and HPA due to lack of market adoption, and these arguments are self-fulfilling prophecy
 - Builder adoption for HPW and HPA has been thwarted due to alternatives that have not positioned the market for ZNE construction expectations
 - Industry attempts to incentivize builder adoption of HPW and HPA have been largely ignored by a substantial portion of the market
 - Market behaviors and Commission policies which result in lack of HPW and HPA adoption are barriers to the kind of market transformation that is necessary to establish CEC predicted cost-effectiveness levels



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Additional Industry Proposals

NAIMA Proposal to Increase Mandatory Features/Minimums:

Beyond the positions that the CEC has already established in the draft BEES and the supporting documents, Owens Corning concurs with recommendations put forth by the North American Insulation Manufacturers Association (NAIMA), that it's time for the mandatory measures and features for the building envelope to be improved above the requirements for R13 and R19 in 2x4 and 2x6 walls respectively.

- While each edition of the BEES has seen incremental improvements, the cavity wall insulation requirements have remained flat at R13 and R19
- In a ZNE Ready Home and a ZNE Home, it makes sense to make these modest improvements in BEES. Accordingly, our research, as previously submitted to the CEC, indicates that the incremental cost delta for said cavity improvements would be cost effective in most, if not all California climate zones. In situations where such improvements are deemed not cost effective due to the mild nature of specific climate zones, we would suggest adjusting the requirements accordingly, as is already an embedded practice in the BEES.
- The proposal put forth by NAIMA to raise the minimum levels of cavity insulation in exterior walls more closely aligns with current 2016 BEES language for HPW wherein meeting prescribed U-factors cannot be easily accomplished with existing minimum levels of cavity insulation – hence, raising these minimums merely updates minimum requirements to align with the practical realities of wall assembly U-factor targets already embedded in current BEES

CALGreen:

- Owens Corning supports the improvements to CALGreen to add prerequisites for High Performance Walls (HPW) and High Performance Attics (HPA), and maintaining QII

We appreciate the opportunity to be part of this process and trust that Commission staff will find the appropriate balance for sound energy and BEES policy going forward. Owens Corning would like to reiterate that as this process moves forward, we remain open to consideration of additional industry proposals that properly balance the need for flexibility in code compliance with established NZE design principles.

Regards,

A handwritten signature in black ink that reads "Shawn P. Mullins". The signature is written in a cursive, flowing style.

Shawn P. Mullins
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